6-30-2019

Coordinated Population Forecast for Malheur County, its Urban Growth Boundaries (UGB), and Area Outside UGBs 2019-2069

Portland State University. Population Research Center

Nicholas Chun
Portland State University

Kevin Rancik
Portland State University

Rhey Haggerty
Portland State University

Jason R. Jurjevich
Portland State University, jjason@email.arizona.edu

Coordinated Population Forecast

2019

Through

2069

Malheur County

Urban Growth Boundaries (UGB) & Area Outside UGBs

Population Research Center
PORTLAND STATE UNIVERSITY

Cover Photo: Lake Owyhee, Malheur County. Gary Halvorson, Oregon State Archives.

Coordinated Population Forecast for Malheur County, its Urban Growth Boundaries (UGB), and Area Outside UGBs 2019-2069

Prepared by

Population Research Center

College of Urban and Public Affairs

Portland State University

June 30, 2019

This project is funded by the State of Oregon through the Department of Land Conservation and Development (DLCD). The contents of this document do not necessarily reflect the views or policies of the State of Oregon.

Project Staff:

Nicholas Chun, Population Forecast Program Manager

Kevin Rancik, GIS & Research Analyst

Rhey Haggerty, Graduate Research Assistant

Jason Jurjevich, Associate Director of Population Research Center

Charles Rynerson, Research Consultant

The Population Research Center and project staff wish to acknowledge and express gratitude for support from the Forecast Advisory Committee (DLCD), the hard work of our staff Deborah Loftus, data reviewers, and many people who contributed to the development of these forecasts by answering questions, lending insight, providing data, or giving feedback.

How to Read this Report

This report should be read with reference to the documents listed below—downloadable on the Forecast Program website (http://www.pdx.edu/prc/opfp).

Specifically, the reader should refer to the following documents:

- *Methods and Data for Developing Coordinated Population Forecasts*—Provides a detailed description and discussion of the forecast methods employed. This document also describes the assumptions that feed into these methods and determine the forecast output.
- *Forecast Tables*—Provides complete tables of population forecast numbers by county and all sub-areas within each county for each five-year interval of the forecast period (2019-2069).

Table of Contents

Table of Figures

Modified Methodology

The Population Research Center, in consultation with DLCD, has identified cost savings associated with a modified methodology for the latter half of the 50-year forecast period (years 26 to 50). Based on feedback we have received, a 25-year forecast fulfills most requirements for local planning purposes and, in an effort to improve the cost effectiveness of the program; we will place more focus on years 1 through 25. Additionally, the cost savings from this move will allow DLCD to utilize additional resources for local government grants. To clarify, we use forecast methods to produce sub-area and county populations for the first 25 years and a modified projection method for the remaining 25 years. The description of our forecast methodology can be accessed through the forecast program website (www.pdx.edu/prc/opfp), while the summary of our modified projection method is below.

For years 26-50, PRC projects the county population using the annual growth rate from the 24th-25th year. For example, if we forecast a county to grow 0.4 percent between the 24th and 25th year of the forecast, we would project the county population thereafter using a 0.4 percent AAGR. To allocate the projected county population to its sub-areas, we extrapolate the change in sub-area shares of county population observed in years 1-25 and apply them to the projected county population.

Comparison to Cycle 1 (2015-17)

To keep up to date with local trends and shifting demands, OPFP regularly updates coordinated population forecasts for Oregon's areas. Beyond the modification to our methodology and additional forecast region (from three regions to four), there are differences between the 2019 updated forecast for Malheur County and the 2016 version. Overall, the 2019 forecast is lower for Malheur County for the 25-year period (2019-2044). While our expectations of births and deaths have not changed from last round, we expect greater net out-migration for Malheur County. These county-level differences translate to the sub-areas, which are expected to capture a larger share of the County's future population as a whole relative to the 2016 forecast. The full breakdown of differences by county and sub-area is stored here: https://www.pdx.edu/prc/current-documents-and-presentations.

Executive Summary

Historical

Different parts of the County experience different growth patterns. Local trends within UGBs and the area outside them collectively influence population growth rates for the County as a whole. UGBs in Malheur County include Adrian, Jordan Valley, Nyssa, Ontario, and Vale.

Malheur County's total population declined slightly in the 2000s (**Figure 1**); however, some of its sub-areas experienced minor population growth during this period.

The population growth that did occur in Malheur County in the 2000s was largely the result of natural increase (more deaths than births). An aging population not only led to an increase in deaths but also resulted in a smaller proportion of women in their childbearing years. This, along with more women having fewer children and having them at older ages has led to births stagnating in recent years. A larger number of births relative to deaths caused a natural increase) in every year from 2001 to 2017, though natural increase waned throughout this period, resulting in minimal population change.

Forecast

Total population in Malheur County as a whole, as well as within its sub-areas, will likely decrease at a similar pace in the near-term (2019 to 2044) compared to the long-term (**Figure 1**). Population decline is a product of net out-migration outpacing natural increase. Malheur County's total population is forecast to decline by 655 people over the next 25 years (2019-2044) and by roughly 1,620 people over the entire 50-year period (2019-2069).

Figure 1. Malheur County and Sub-Areas—Historical and Forecast Populations, and Average Annual Growth Rates (AAGR)

	Historical			Forecast					
	2000	2010	AAGR (2000-2010)	2019	2044	2069	AAGR (2010-2019)	AAGR (2019-2044)	AAGR (2044-2069)
Malheur County	**31,615**	**31,313**	***-0.1%***	**31,011**	**30,356**	**29,392**	***-0.1%***	***-0.1%***	***-0.1%***
Adrian	147	177	*1.9%*	179	184	186	*0.1%*	*0.1%*	*0.0%*
Jordan Valley	239	181	*-2.7%*	160	145	129	*-1.3%*	*-0.4%*	*-0.5%*
Nyssa	3,380	3,455	*0.2%*	3,463	3,523	3,555	*0.0%*	*0.1%*	*0.0%*
Ontario	12,267	12,296	*0.0%*	12,207	12,256	12,149	*-0.1%*	*0.0%*	*0.0%*
Vale	2,206	2,141	*-0.3%*	2,159	2,199	2,208	*0.1%*	*0.1%*	*0.0%*
Outside UGBs	13,376	13,063	*-0.2%*	12,843	12,049	11,165	*-0.2%*	*-0.3%*	*-0.3%*

Sources: U.S. Census Bureau, 2000 and 2010 Censuses; Forecast by Population Research Center (PRC).

Note: For simplicity each UGB is referred to by its primary city's name.

14-Year Population Forecast

In accordance with House Bill 2254, which streamlined the UGB process based on long-term housing and employment needs, **Figure 2** provides a 14-year population forecast (2019-2033) for the County and its sub-areas. Populations at the 14th year of the forecast were interpolated using the average annual growth rate between the 2030-2035 period. The population interpolation template is stored here: https://www.pdx.edu/prc/current-documents-and-presentations.

Figure 2. Malheur County and Sub-Areas—14-Year Population Forecast

	2019	2033	14-Year Change	AAGR (2019-2033)
Malheur County	**31,011**	**30,725**	**-286**	***-0.1%***
Adrian	179	182	2	*0.1%*
Jordan Valley	160	144	-16	*-0.7%*
Nyssa	3,463	3,505	42	*0.1%*
Ontario	12,207	12,235	28	*0.0%*
Vale	2,159	2,190	32	*0.1%*
Outside UGBs	12,843	12,469	-374	*-0.2%*

Sources: Forecast by Population Research Center (PRC).

Note: For simplicity each UGB is referred to by its primary city's name.

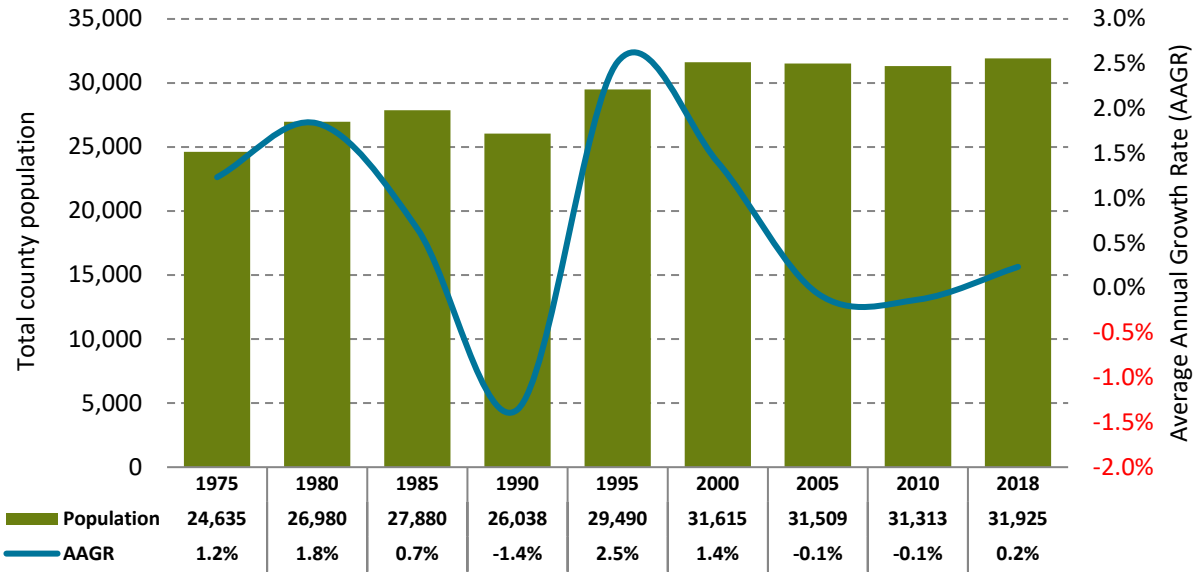
Historical Trends

Different growth patterns occur in different parts of Malheur County. Each of Malheur County's sub-areas were examined for any significant demographic characteristics or changes in population or housing growth that might influence their individual forecasts. Factors analyzed include age composition of the population, race and ethnicity, births, deaths, migration, the number of housing units, occupancy rate, and persons per household (PPH). It should be noted that population trends of individual sub-areas often differ from those of the County as a whole. However, population growth rates for the County are collectively influenced by local trends within its sub-areas.

Population

Malheur County's total population grew from roughly 24,640 in 1975 to about 32,000[1] in 2018 (**Figure 3**). During this 40-year period, the County experienced high growth rates during the late 1970s, which coincided with a period of relative economic prosperity. During the early 1980s, challenging economic conditions, both nationally and within the county, led to negative population growth rates by the end of the decade. During the early 1990s population growth rates again increased but challenging economic conditions late in the decade again yielded declines. Following the turn of the century, Malheur County experienced negligible population change between 2000 and 2017.

Figure 3. Malheur County—Total Population by Five-year Intervals (1975-2018)



	1975	1980	1985	1990	1995	2000	2005	2010	2018
Population	24,635	26,980	27,880	26,038	29,490	31,615	31,509	31,313	31,925
AAGR	1.2%	1.8%	0.7%	-1.4%	2.5%	1.4%	-0.1%	-0.1%	0.2%

Sources: U.S. Census Bureau, 1980, 1990, 2000, and 2010 Censuses; Population Research Center (PRC), July 1st Annual Estimates 0 1975, 1985, 1995, 2005 and 2018.

[1] Population Estimates from the Oregon Population Estimates Program (OPEP) may not be consistent with the 2019 population forecast due to different methodologies and data sources.

During the 2000s, Malheur County's average annual population growth rate stood at -0.1 percent (**Figure 4**). Adrian and Nyssa recorded average annual growth rates above that of the County as a whole, at 1.9 percent and 0.2 percent, respectively. The population of Ontario held steady from the 2000 to 2010 period, while Jordan Valley, Vale, and the outside UGB area experienced moderate population decline.

Figure 4. Malheur County and Sub-areas—Total Population and Average Annual Growth Rate (AAGR) (2000 and 2010)[2]

	2000	2010	AAGR (2000-2010)	Share of County 2000	Share of County 2010	Change (2000-2010)
Malheur County	*31,615*	*31,313*	*-0.1%*	*100.0%*	*100.0%*	*0.0%*
Adrian	*147*	*177*	1.9%	0.5%	0.6%	0.1%
Jordan Valley	*239*	*181*	-2.7%	0.8%	0.6%	-0.2%
Nyssa	*3,380*	*3,455*	0.2%	10.7%	11.0%	0.3%
Ontario	*12,267*	*12,296*	0.0%	38.8%	39.3%	0.5%
Vale	*2,206*	*2,141*	-0.3%	7.0%	6.8%	-0.1%
Outside UGBs	*13,376*	*13,063*	-0.2%	42.3%	41.7%	-0.6%

Sources: U.S. Census Bureau, 2000 and 2010 Censuses.

Note: For simplicity each UGB is referred to by its primary city's name.

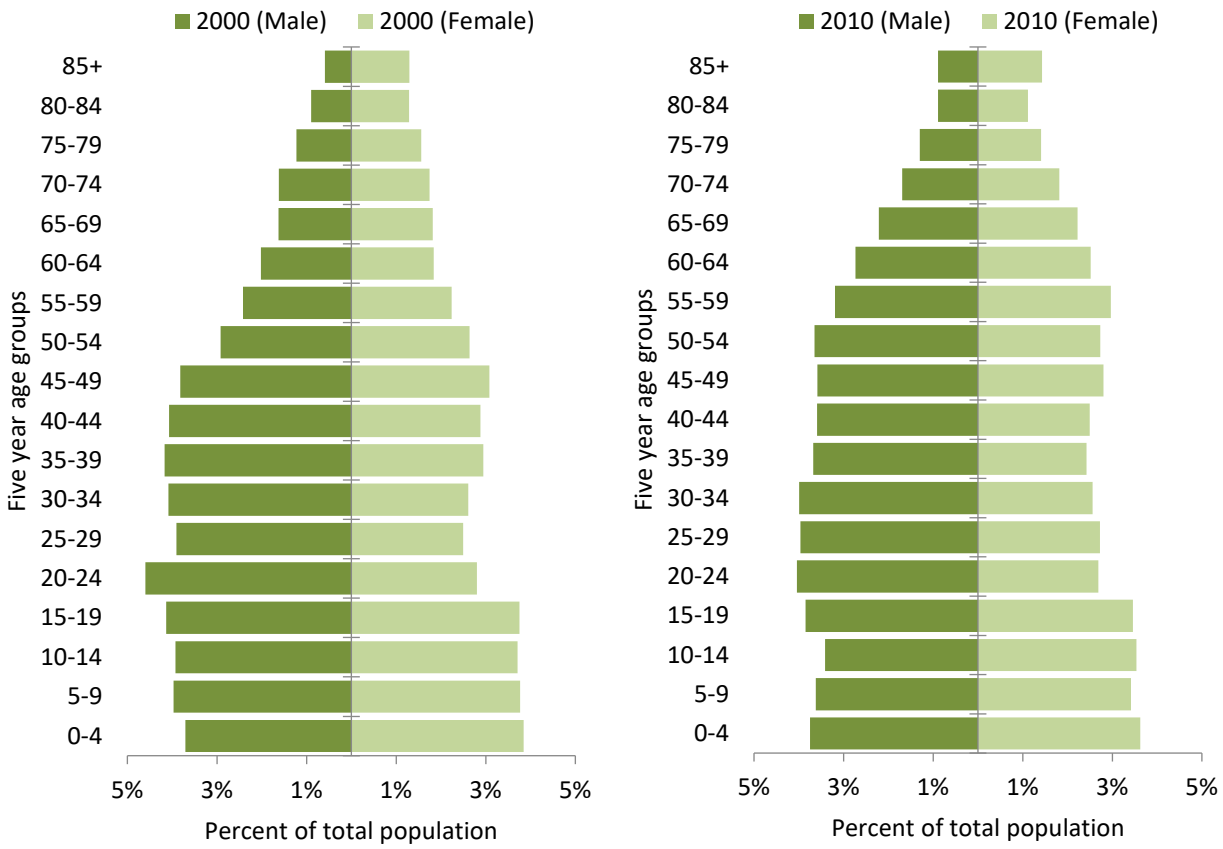
Age Structure of the Population

Similar to most areas across Oregon, Malheur County's population is aging. An aging population significantly influences the number of deaths but also yields a smaller proportion of women in their childbearing years, which may result in a slowdown or decline in births. The shift in the age structure from 2000 to 2010 illustrates this phenomenon (**Figure 5**). Further underscoring the countywide trend in aging—the median age went from 34.0 in 2000 to 36.2 in 2010[3].

[2] When considering growth rates and population growth overall, it should be noted that a slowing of growth rates does not necessarily correspond to a slowing of population growth in absolute numbers. For example, if a UGB with a population of 100 grows by another 100 people, it has doubled in population. If it then grows by another 100 people during the next year, its relative growth is half of what it was before even though absolute growth stays the same.

[3] Median age is sourced from the U.S. Census Bureau's 2000 and 2010 Censuses.

Figure 5. Malheur County—Age Structure of the Population (2000 and 2010)



Sources: U.S. Census Bureau, 2000 and 2010 Censuses

Race and Ethnicity

While the statewide population is aging, another demographic shift is occurring across Oregon: minority populations are growing as a share of total population. A growing minority population affects both the number of births and average household size. The Hispanic population within Malheur County increased modestly from 2000 to 2010 (**Figure 6**), while the White; not Hispanic population decreased over the same time period. This increase in the Hispanic population and other minority populations brings with it several implications for future population change. First, both nationally and at the state level, fertility rates among Hispanic and minority women tend to be higher than among White; not Hispanic women. However, it is important to note more recent trends show these rates are quickly decreasing. Second, Hispanic and minority households tend to be larger relative to White; not Hispanic households.

Figure 6. Malheur County—Hispanic or Latino and Race (2000 and 2010)

Hispanic or Latino and Race	2000		2010		Absolute Change	Relative Change
Total population	31,615	100.0%	31,313	100.0%	-302	-1.0%
Hispanic or Latino	8,099	25.6%	9,867	31.5%	1,768	21.8%
Not Hispanic or Latino	23,516	74.4%	21,446	68.5%	-2,070	-8.8%
White alone	21,752	68.8%	19,906	63.6%	-1,846	-8.5%
Black or African American alone	369	1.2%	331	1.1%	-38	-10.3%
American Indian and Alaska Native alone	273	0.9%	235	0.8%	-38	-13.9%
Asian alone	608	1.9%	511	1.6%	-97	-16.0%
Native Hawaiian and Other Pacific Islander alone	18	0.1%	12	0.0%	-6	-33.3%
Some Other Race alone	37	0.1%	21	0.1%	-16	-43.2%
Two or More Races	459	1.5%	430	1.4%	-29	-6.3%

Sources: U.S. Census Bureau, 2000 and 2010 Censuses.

Births

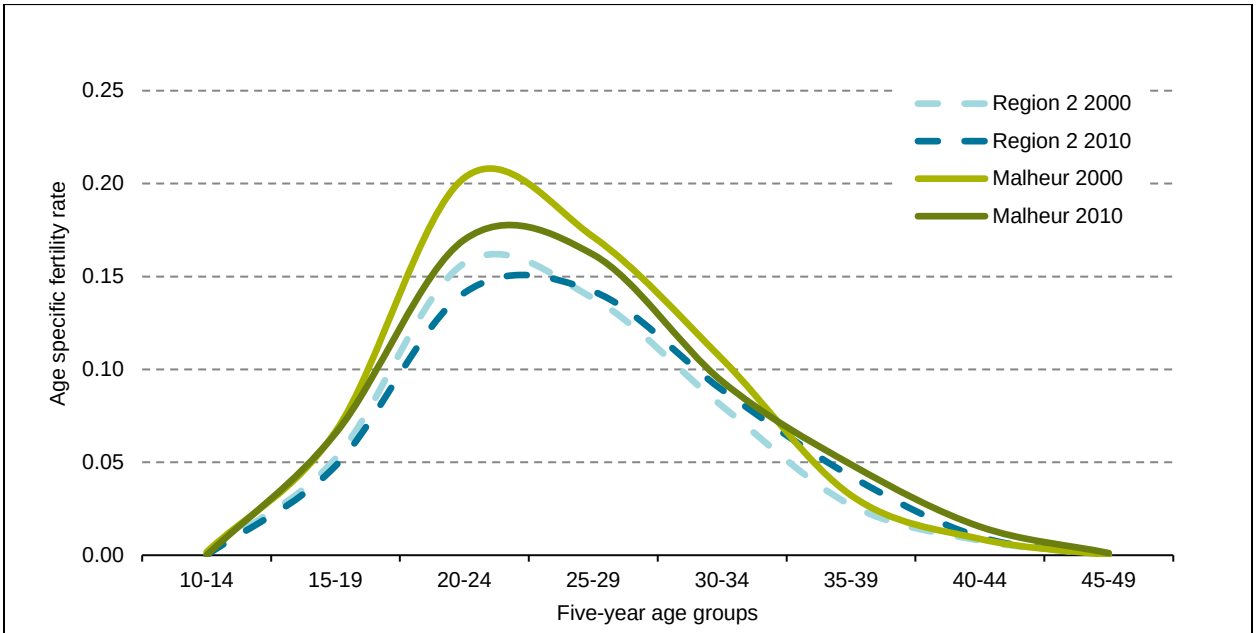
Historic total fertility rates (TFR), or the average number of children that would be born to a woman over her lifetime, for Malheur County differ from trends from eastern Oregon counties as a whole (Region 2) (**Figure 7**). Total fertility rates were lower in Malheur County in 2010 compared to 2000, while rates increase for Region 2. Malheur County experienced a more pronounced decline in age specific fertility for women under 30 compared to Region 2 (**Figure 8**). Total fertility in both the County and the state remain above replacement fertility (2.1), indicating that future cohorts of women in their birth-giving years will grow overtime, excluding the influence of net in/out-migration.

Figure 7. Malheur County and Region 2—Total Fertility Rates (2000 and 2010)

	2000	2010
Malheur County	2.95	2.78
Region 2	2.32	2.37

Sources: U.S. Census Bureau, 2000 and 2010 Censuses.
Oregon Health Authority, Center for Health Statistics.
Calculations by Population Research Center (PRC).

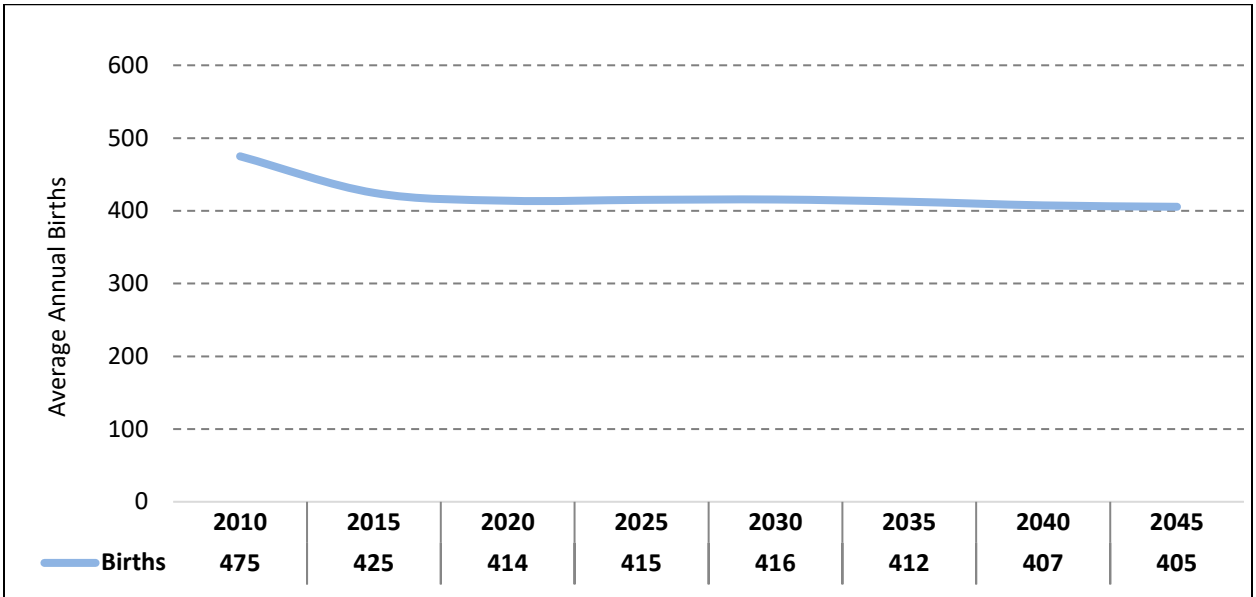
Figure 8. Malheur County and Region 2—Age Specific Fertility Rate (2000 and 2010)



Sources: U.S. Census Bureau, 2000 and 2010 Censuses. PRC Estimates. Oregon Health Authority, Center for Health Statistics. Calculations and Forecast by Population Research Center (PRC).

Figure 9 shows the number of historic and forecasted births for the county. The number of annual births from 2000-10 to 2010-15 declined slightly, but are expected to stabilize for the 25-year period.

Figure 9. Malheur County—Average Annual Births (2010-2045)

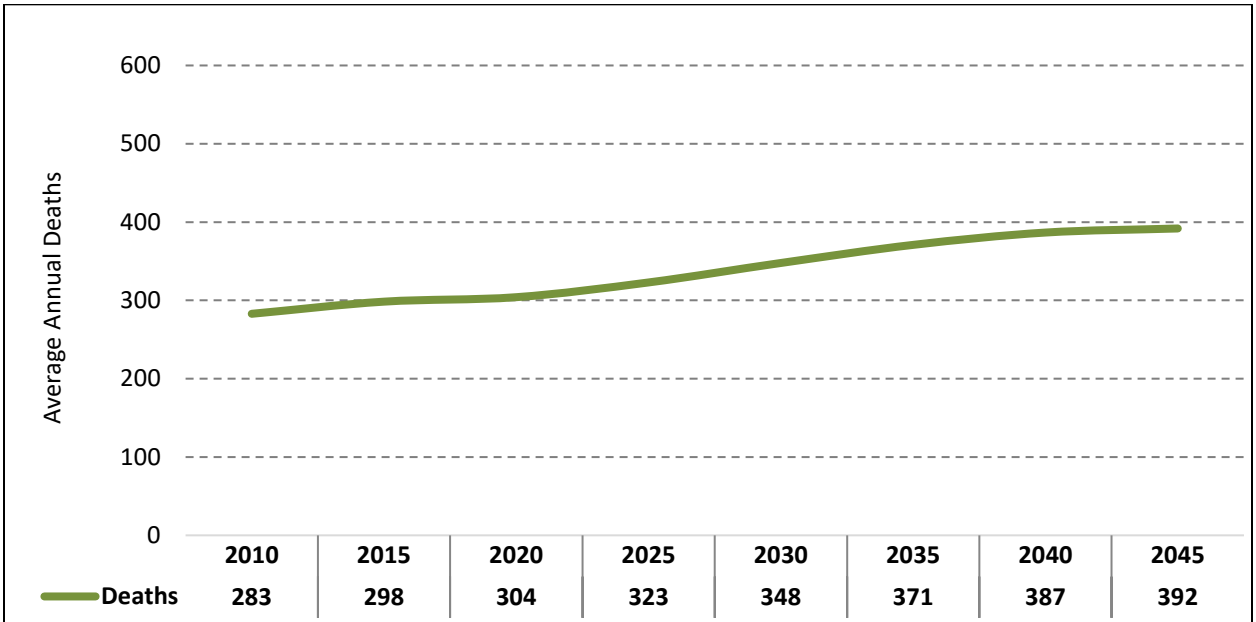


Sources: Oregon Health Authority, Center for Health Statistics. Calculations and Forecast by Population Research Center (PRC).
Note: The years signify the end of the period for which average annual numbers were calculated. The average annual numbers for "2010" were calculated for the 2000-2010 period, with the remaining years calculated for their preceding five-year periods.

Deaths

The population in the county, as a whole, is aging and contrary to the statewide trend, people of all ages are not necessarily living longer[4]. For both Malheur County and eastern Oregon, the survival rates changed little between 2000 and 2010, underscoring the fact that mortality is the most stable component, relative to birth and migration rates, of population change. Average annual deaths decreased slightly from 2000-10 and 2010-15 but are expected to increase steadily overtime (**Figure 10**).

Figure 10. Malheur County—Average Annual Deaths (2010-2045)



Sources: Oregon Health Authority, Center for Health Statistics. Calculations and Forecast by Population Research Center (PRC).
Note: The years signify the end of the period for which average annual numbers were calculated. The average annual numbers for "2010" were calculated for the 2000-2010 period, with the remaining years calculated for their preceding five-year periods.

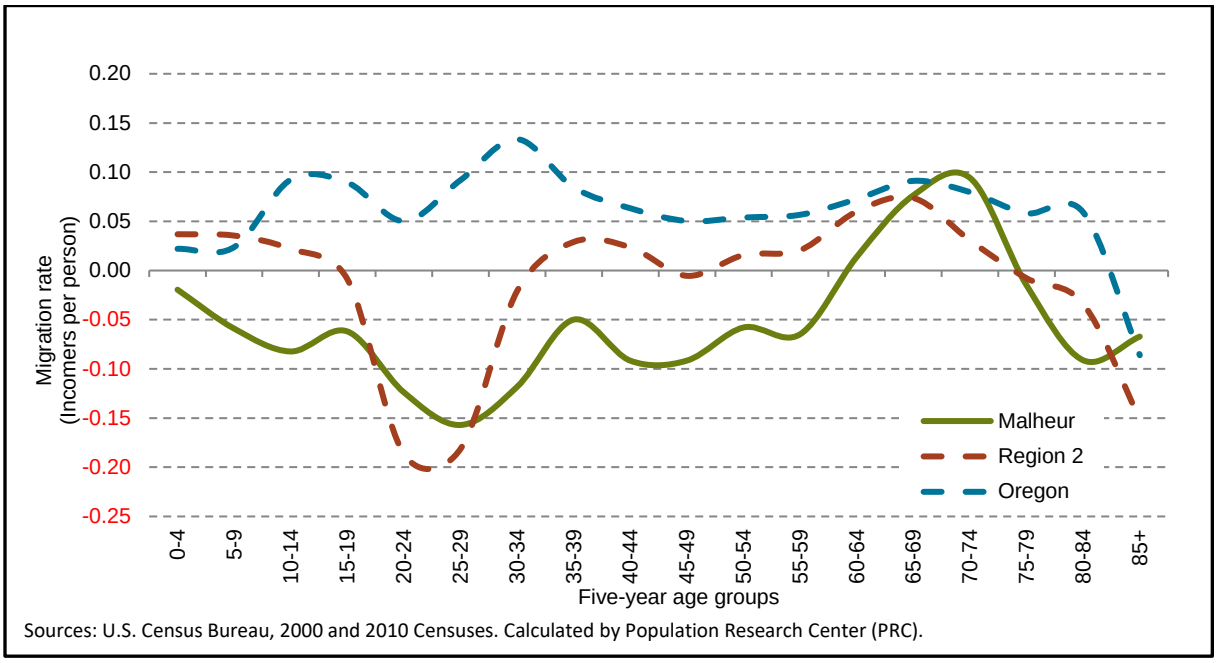
[4] Researchers have found evidence for a widening rural-urban gap in life expectancy. This gap is particularly apparent between race and income groups and may be one explanation for the decline in life expectancy in the 2000s. See the following research article for more information. *Singh, Gopal K., and Mohammad Siahpush. "Widening rural-urban disparities in life expectancy, US, 1969-2009." American Journal of Preventative Medicine 46, no. 2 (2014): e19-e29.*

Migration

The propensity to migrate is strongly linked to age and stage of life. As such, age-specific migration rates are critically important for assessing these patterns across five-year age cohorts. **Figure 11** shows the historical age-specific migration rates by five-year age group, both for Malheur County, eastern Oregon (Region 2), and Oregon. The migration rate is shown as the number of net migrants per person by age group.

Malheur County's migration rates differ from the patterns of many other Oregon counties. While the County experienced a net out-migration as a whole in the 00s, retirees moved into the County, but left shortly thereafter to areas with medical facilities and end-of-life care.

Figure 11. Malheur County, Region 2, and Oregon—Age Specific Migration Rates (2000-2010)

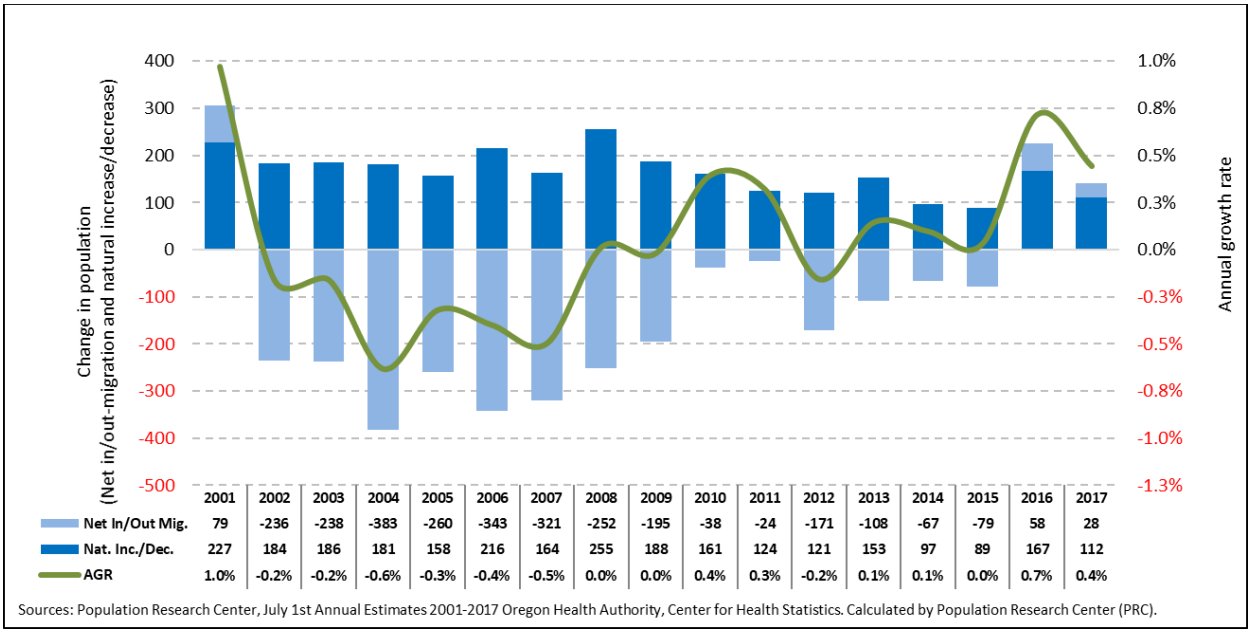


Sources: U.S. Census Bureau, 2000 and 2010 Censuses. Calculated by Population Research Center (PRC).

Historical Trends in Components of Population Change

In summary, Malheur County has experienced a waning natural increase since 2000 (**Figure 12**). Net out-migration outpaced natural increase in the 2000s, leading to population decline. Since then, net in/out-migration has fluctuated, producing minimal population change.

Figure 12. Malheur County—Components of Population Change (2001-2017)[5]



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Net In/Out Mig.	79	-236	-238	-383	-260	-343	-321	-252	-195	-38	-24	-171	-108	-67	-79	58	28
Nat. Inc./Dec.	227	184	186	181	158	216	164	255	188	161	124	121	153	97	89	167	112
AGR	1.0%	-0.2%	-0.2%	-0.6%	-0.3%	-0.4%	-0.5%	0.0%	0.0%	0.4%	0.3%	-0.2%	0.1%	0.1%	0.0%	0.7%	0.4%

Sources: Population Research Center, July 1st Annual Estimates 2001-2017 Oregon Health Authority, Center for Health Statistics. Calculated by Population Research Center (PRC).

[5] Annual net in/out-migration estimates are based on population estimates from the Oregon Population Estimates Program. As such, migration assumptions for the 2019 population forecast may not be consistent with assumptions from OPEP.

Housing and Households

The total number of housing units in Malheur County increased from 2000 to 2010, but growth slowed with the onset of the Great Recession in 2008. Over the entire 2000 to 2010 period, the total number of housing units increased by 4.1 percent countywide; this was more than 460 new housing units (**Figure 13**). All sub-areas experienced at least a small increase in housing units during this time period. Over a half of the new housing units (269) were built in the outside UGB area, increasing its share of county housing units to almost 38 percent. Ontario saw the largest increase in housing units of any sub-area (63 units), but its share of county housing units declined by over 1 percent.

Housing growth rates may differ from population growth rates because (1) the numbers of total housing units are fewer than the numbers of people; (2) the UGB has experienced changes in the average number of persons per household; or (3) occupancy rates have changed (typically most pronounced in coastal locations with vacation-oriented housing).

Figure 13. Malheur County and Sub-Areas—Total Housing Units (2000 and 2010)

	2000	2010	AAGR (2000-2010)	Share of County 2000	Share of County 2010	Change (2000-2010)
Malheur County	*11,232*	*11,692*	*0.4%*	*100.0%*	*100.0%*	*0.0%*
Adrian	66	78	1.7%	0.6%	0.7%	0.1%
Jordan Valley	140	149	0.6%	1.2%	1.3%	0.0%
Nyssa	1,172	1,223	0.4%	10.4%	10.5%	0.0%
Ontario	4,907	4,970	0.1%	43.7%	42.5%	-1.2%
Vale	807	863	0.7%	7.2%	7.4%	0.2%
Outside UGBs	4,140	4,409	0.6%	36.9%	37.7%	0.9%

Sources: U.S. Census Bureau, 2000 and 2010 Censuses

Note: For simplicity each UGB is referred to by its primary city's name.

Average household size, or persons per household (PPH), in Malheur County was 2.7 in 2010, a small decrease from 2.8 in 2000 (**Figure 14**). A decline in PPH was uniform across all sub-areas. Malheur County's PPH in 2010 was slightly higher than Oregon's as a whole, which had a PPH of 2.5. PPH varied across the sub-areas, with all of them falling between 1.9 (Jordan Valley) and 3.1 (Nyssa). In general, areas with an older or aging population will, more often than not, experience a decline in PPH over time.

Occupancy rates tend to fluctuate more than PPH. This is particularly true in smaller UGBs where fewer housing units allow for larger relative changes in occupancy rates. From 2000 to 2010, the occupancy rate in Malheur County decreased slightly (**Figure 14**). A slight drop in occupancy rates was mostly uniform across most sub-areas. Two sub-areas deviated from the countywide trend of declining occupancy rates; Adrian and Ontario both saw marginal increases in their occupancy rates between 2000 and 2010.

Figure 14. Malheur County and Sub-Areas—Persons per Household (PPH) and Occupancy Rate

	Persons Per Household (PPH)			Occupancy Rate		
	2000	2010	Change 2000-2010	2000	2010	Change 2000-2010
Malheur County	*2.8*	*2.7*	*-3.0%*	*91.0%*	*89.0%*	*-1.9%*
Adrian	*2.5*	*2.5*	*1.5%*	*89.4%*	*89.7%*	*0.3%*
Jordan Valley	*2.2*	*1.9*	*-11.4%*	*77.9%*	*63.1%*	*-14.8%*
Nyssa	*3.1*	*3.1*	*-1.1%*	*93.1%*	*91.3%*	*-1.8%*
Ontario	*2.6*	*2.6*	*-0.8%*	*92.0%*	*92.2%*	*0.2%*
Vale	*2.8*	*2.6*	*-6.3%*	*91.7%*	*89.0%*	*-2.7%*
Outside UGBs	*2.8*	*2.7*	*-5.5%*	*89.6%*	*85.8%*	*-3.8%*

Sources: U.S. Census Bureau, 2000 and 2010 Censuses. Calculated by Population Research Center (PRC)

Note: For simplicity each UGB is referred to by its primary city's name.

Assumptions for Future Population Change

Evaluating past demographic trends provides clues about what the future will look like and helps determine assumptions of likely scenarios for population change. Assumptions about fertility, mortality, and migration were developed for Malheur County's forecast and for each of its larger sub-areas[6]. Population change for smaller sub-areas is determined by the change in the number of total housing units, PPH, occupancy rates, and group quarters population. Assumptions around these components of growth are derived from observations of historic building patterns, current plans for future housing development, and household demographics.

Assumptions for the County and Larger Sub-Areas

From 2000 to 2010, Malheur County experienced 1,920 more births than deaths, causing a natural increase. This population growth was negated by net out-migration (2,222 persons), which resulted in a population decline of 302 people during the 2000 to 2010 period. We expect natural increase to decline in magnitude over time, resulting in continued population loss throughout the forecast period.

During the forecast period, the population in Malheur County is expected to age more quickly during the first half of the forecast period and then remain relatively stable over the forecast horizon. The total fertility rate is expected to remain stable throughout the forecast period (2.43 in 2019 to 2.41 in 2044), though births will stagnate due to a net out-migration of young adults. Our assumptions of fertility for the county's larger sub-areas vary and are detailed in Appendix B.

Changes in survival rates are more stable than fertility and migration rates; overall life expectancy is expected to increase slightly over the forecast period. In spite of this trend, Malheur County's aging population will increase the overall number of deaths throughout the forecast period.

Migration is the most volatile and challenging demographic component to forecast due to the many factors influencing migration patterns. Economic, social, and environmental factors such as employment, educational opportunities, housing availability, family ties, cultural affinity, climate change, and natural amenities occurring both inside and outside the study area can affect both the direction and the volume of migration.

We assume rates will change in line with historic trends unique to Malheur County. Net in-migration of retirees and net out-migration of other age groups will persist throughout the forecast period. We assume that as deaths rise over time, fewer people will net out-migrate from the County as home turnover rates increase. Specifically, countywide average annual net out-migration is expected to decrease from 140 net out-migrants in 2019 to 53 net out-migrants in 2044. Despite this, a net out-migration is expected to overtake a waning natural increase, which results in a slight population decline.

[6] County sub-areas with populations greater than 7,000 in the forecast launch year were forecast using the cohort-component method. County sub-areas with populations less than 7,000 in forecast launch year were forecast using the housing-unit method. See Glossary of Key Terms at the end of this report for a brief description of these methods or refer to the *Methods* document for a more detailed description of these forecasting techniques.

Assumptions for Smaller Sub-Areas

Rates of population growth for the smaller UGBs are determined by corresponding growth in the number of housing units as well as changes in housing occupancy rates and PPH. The change in housing unit growth is much more variable than change in housing occupancy rates or PPH.

We assume occupancy rates and PPH will remain relatively stable over the forecast period. Smaller household size is associated with an aging population in Malheur County and its sub-areas.

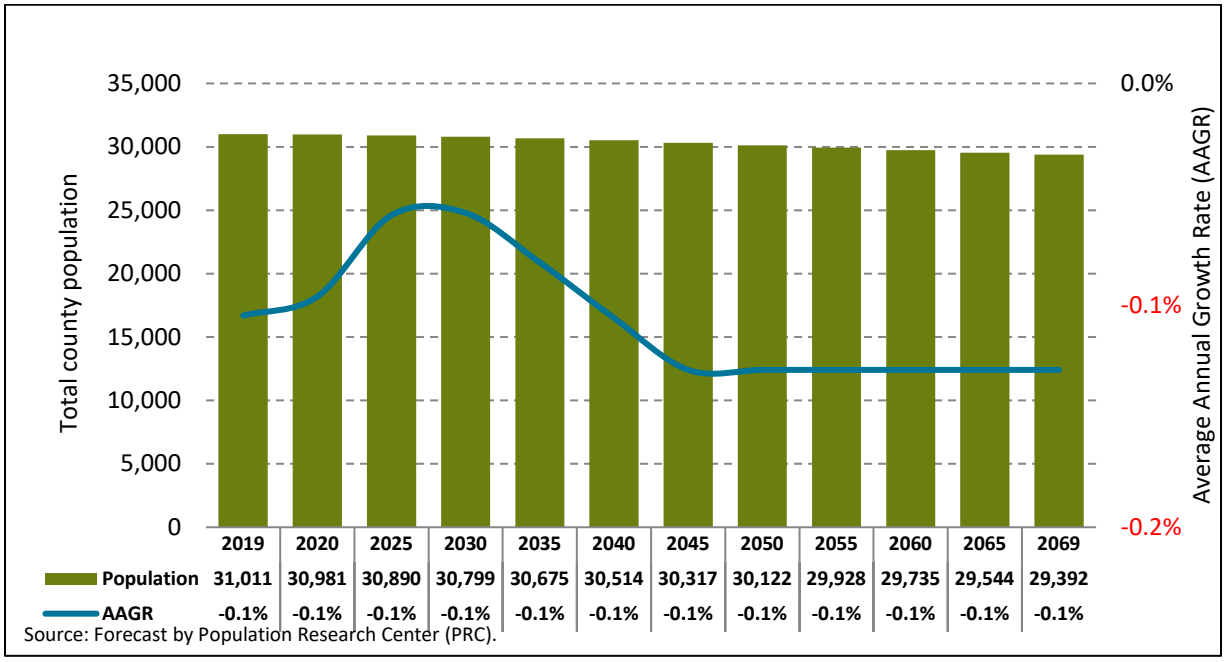
If planned housing units were reported in the surveys, we accounted for them being constructed over the next 5-15 years (or as specified by local officials). Finally, for sub-areas where population growth has been flat or declining, and there is no planned housing construction, we temper population change.

Forecast Trends

Under the most-likely population growth scenario for Malheur County, we expect minimal change to countywide and sub-area populations over the forecast period. The countywide population growth rate is forecast to peak in 2020 and then slowly decline throughout the forecast period. Population decline is driven by both (1) an aging population—contributing to steady increase in deaths—as well as (2) net out-migration tapering in the long run to account for uncertainty.

Malheur County's total population is forecast to decrease by roughly 1,620 persons (-5.2 percent) from 2019 to 2069, which translates into a total countywide population of 29,392 in 2069 (**Figure 15**). The population is forecast to decline at a steady rate—-0.1 percent—during the entire forecast period.

Figure 15. Malheur County—Total Forecast Population by Five-year Intervals (2019-2069)



Source: Forecast by Population Research Center (PRC).

Malheur County's largest UGBs, Ontario, is forecast to experience population growth of almost 50 people from 2019 to 2044 but a population decline of nearly 110 people from 2044 to 2069 (**Figure 16**). The share of the total countywide population are forecast to increase in Ontario by almost 2 percent during the 2019 to 2069 time period.

Figure 16. Malheur County and Larger Sub-Areas—Forecast Population and AAGR

	2019	2044	2069	AAGR (2019-2044)	AAGR (2044-2069)	Share of County 2019	Share of County 2044	Share of County 2069
Malheur County	**31,011**	**30,356**	**29,392**	***-0.1%***	***-0.1%***	--	--	--
Ontario	12,207	12,256	12,149	*0.0%*	*0.0%*	*39.4%*	*40.4%*	*41.3%*
Outside UGBs	12,843	12,049	11,165	*-0.3%*	*-0.3%*	*41.4%*	*39.7%*	*38.0%*

Source: Forecast by Population Research Center (PRC)

Note: For simplicity each UGB is referred to by its primary city's name.

Although meager, most of the smaller UGBs are expected to have positive in both the first and second halves of the forecast (**Figure 17**). The smaller UGBs are expected to grow by a combined number of roughly 90 people from 2019 to 2044, and another 27 people from 2044 to 2069. Jordan Valley is the only smaller UGB forecast to experience a population decline, at just over 30 people through the forecast period.

Figure 17. Malheur County and Smaller Sub-Areas—Forecast Population and AAGR

	2019	2044	2069	AAGR (2019-2044)	AAGR (2044-2069)	Share of County 2019	Share of County 2044	Share of County 2069
Malheur County	**31,011**	**30,356**	**29,392**	***-0.1%***	***-0.1%***	--	--	--
Adrian	179	184	186	*0.1%*	*0.0%*	*0.6%*	*0.6%*	*0.6%*
Jordan Valley	160	145	129	*-0.4%*	*-0.5%*	*0.5%*	*0.5%*	*0.4%*
Nyssa	3,463	3,523	3,555	*0.1%*	*0.0%*	*11.2%*	*11.6%*	*12.1%*
Vale	2,159	2,199	2,208	*0.1%*	*0.0%*	*7.0%*	*7.2%*	*7.5%*
Outside UGBs	12,843	12,049	11,165	*-0.3%*	*-0.3%*	*41.4%*	*39.7%*	*38.0%*

Source: Forecast by Population Research Center (PRC)

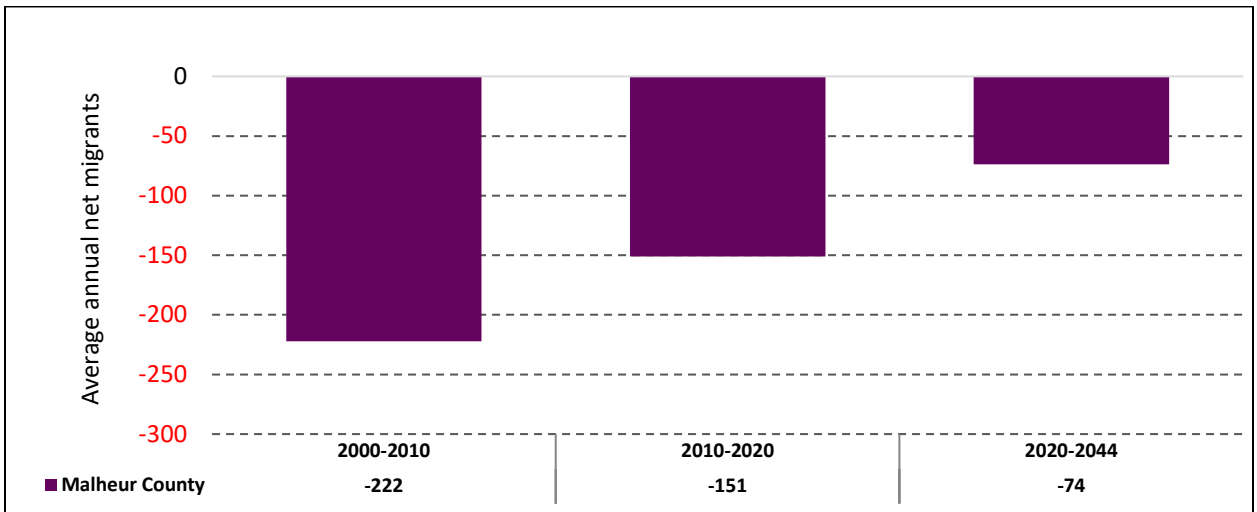
Note: For simplicity each UGB is referred to by its primary city's name.

Although smaller UGB sub-area populations are expected to increase slightly during the forecast period, the overall Malheur County population is expected to experience a decline. This is due to population decline the outside UGB area by nearly 800 people from 2019 to 2044, and by more than 880 people from 2044 to 2069. This decline stems from an aging population and subsequently a drop in PPH and occupancy rates. This, coupled with the minor growth of populations within the UGBs, is expected to create a slight redistribution of the population. The countywide population share for the outside UGB area is expected to decrease by almost 3.5 percent, from 41.5 percent in 2019 to 38.0 percent in 2069.

Forecast Trends in Components of Population Change

As previously discussed, the number of out-migrants is forecast to outweigh the number of in-migrants in Malheur County, creating a negative net out-migration of new residents that is expected to persist throughout the forecast period. Still, the average annual net out-migration is forecast to decrease from the near-term rate of 151 individuals (2010-2020) to 74 individuals later in the forecast (2020-2044) (**Figure 18**).

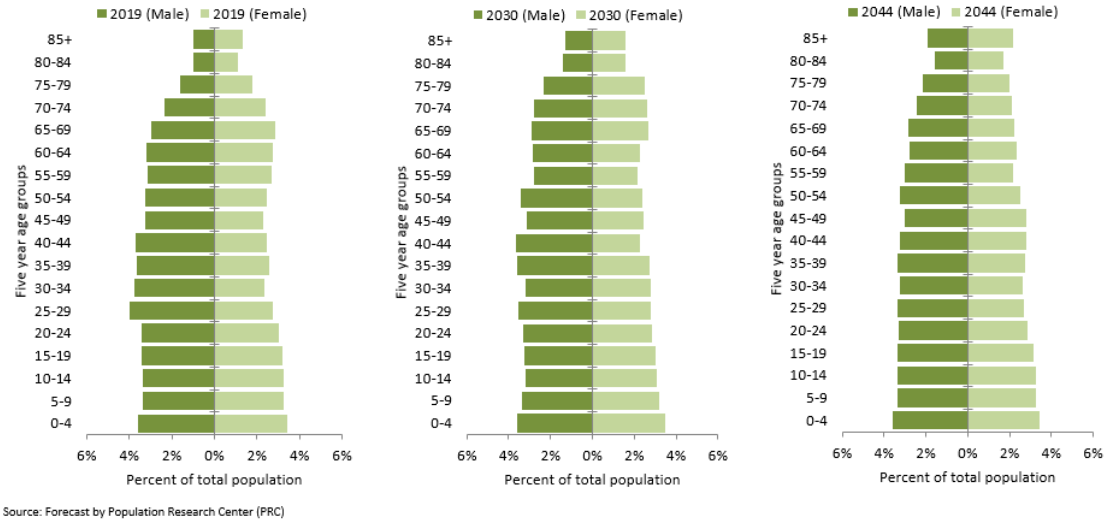
Figure 18. Malheur County—Average Annual Net In/Out-Migration (2000-2010, 2010-2020, and 2020-2044)



Sources: U.S. Census Bureau, 2000 and 2010 Censuses. Calculations and Forecast by Population Research Center (PRC).
Note: The average annual numbers were calculated for the 10 year periods (2000-2010 and 2010-2020) and the 24 year period (2020-2044).

In addition to net out-migration, the other key component shaping Malheur County's forecasted population is the aging population. From 2019 to 2030, the proportion of the County population 65 years of age or older is forecast to grow from roughly 18.2 percent to 22 percent, and to maintain that proportion through 2044 (**Figure 19**). For a more detailed look at the age structure of Malheur County's population, see the final forecast table published to the forecast program website (https://www.pdx.edu/prc/current-documents-and-presentations).

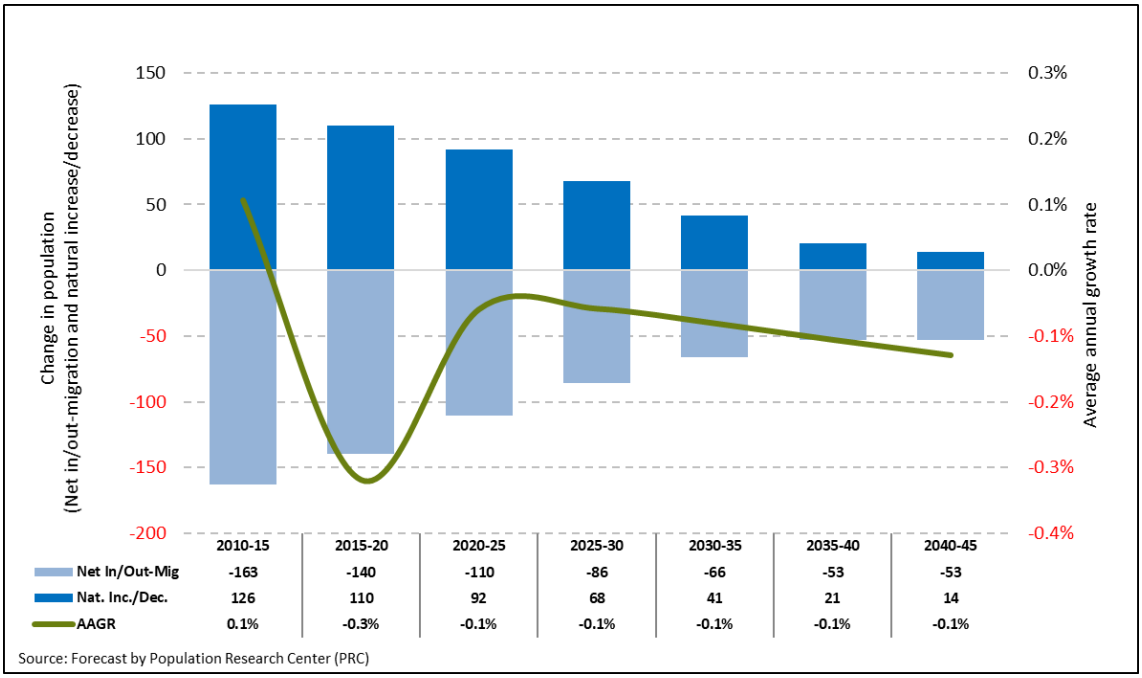
Figure 19. Malheur County—Age Structure of the Population (2019, 2030, and 2044)



Source: Forecast by Population Research Center (PRC)

In summary, current population growth is expected to steadily decline, as natural increase attenuates (**Figure 20**). While net out-migration is expected to wane throughout the forecast period, natural increase will not outweigh the number of residents moving out of Malheur County.

Figure 20. Malheur County—Components of Population Change (2010-2045)[7]



Source: Forecast by Population Research Center (PRC)

[7] 2010-15 components are based on population estimates from the Oregon Population Estimates Program. As such, natural increase/decrease and net in/out-migration for that period may not be consistent with the 2019 forecast assumptions.

Glossary of Key Terms

Cohort-Component Method: A method used to forecast future populations based on changes in births, deaths, and migration over time.

Coordinated population forecast: A population forecast prepared for the County along with population forecasts for its urban growth boundary (UGB) areas and non-UGB area.

Housing unit: A house, apartment, mobile home or trailer, group of rooms, or single room that is occupied or is intended for occupancy.

Housing-Unit Method: A method used to forecast future populations based on changes in housing unit counts, vacancy rates, the average numbers of persons per household (PPH), and group quarter population counts.

Occupancy rate: The proportion of total housing units that are occupied by an individual or group of persons.

Persons per household (PPH): The average household size (i.e. the average number of persons per occupied housing unit).

Replacement Level Fertility: The average number of children each woman needs to bear in order to replace the population (to replace each male and female) under current mortality conditions in the U.S. This is commonly estimated to be 2.1 children per woman.

Appendix A: Surveys and Supporting Information

Supporting information is based on planning documents and reports, and from submissions to PRC from city officials and staff, and other stakeholders. The information pertains to characteristics of each city area, and to changes thought to occur in the future. The cities of Adrian, Jordan Valley, Nyssa, Ontario, and Vale did not submit survey responses.

Appendix B: Specific Assumptions

Adrian

We assume housing unit growth rates will decline throughout the forecast period. We assume the occupancy rate and persons per household (PPH) to be stable at 89.7 percent and 2.53 for the 25-year horizon, respectively. There is no group quarters population in this sub-area.

Jordan Valley

We assume slow housing unit growth throughout the forecast period. We assume the occupancy rate will decline from 57.1 percent to 53.1 percent and persons per household will decline slightly from 1.88 to 1.75 for the 25-year horizon. There is no group quarters population in this sub-area.

Nyssa

We assume slow housing unit growth throughout the forecast period. We assume the occupancy rate to be stable at 91.3 percent while persons per household (PPH) will decline slightly from 3.07 to 2.94 for the 25-year horizon. We assume the group quarters population to remain at 31.

Ontario

We assume total fertility rates will decline throughout the forecast period as women under 30 continue to have fewer children. We assume forecasted trends in survival rates to be the same as those for the County as a whole; these rates are expected to increase slightly for the 65+ population over the 25 year horizon. Age specific net migration rates are generally in line with county patterns.

Vale

We assume steady housing unit growth throughout the forecast period. We assume the occupancy rate to be stable at 89.0 percent while persons per household (PPH) will decline from 2.60 to 2.41 for the 25-year horizon. We assume the group quarters population to remain at 120.

Outside UGBs

We assume total fertility rates will decline slightly throughout the forecast period. We assume forecasted trends in survival rates to be the same as those for the County as a whole; these rates are expected to increase slightly for the 65+ population over the 25 year horizon. Age specific net migration rates are generally in line with county patterns, though we assume the sub-area will experience a steeper net out-migration of 70+ year olds.

Appendix C: Detailed Population Forecast Results

Figure 21. Malheur County—Population by Five-Year Age Group

Population Forecasts by Age Group / Year	2019	2020	2025	2030	2035	2040	2044
00-04	2,174	2,160	2,168	2,195	2,160	2,138	2,131
05-09	2,058	2,045	1,990	2,023	2,051	2,023	2,007
10-14	2,054	2,035	1,984	1,934	1,988	2,020	1,998
15-19	2,054	2,044	1,962	1,917	1,890	1,947	1,972
20-24	1,991	1,957	1,944	1,889	1,847	1,826	1,870
25-29	2,080	2,085	1,933	1,948	1,893	1,855	1,838
30-34	1,895	1,897	1,948	1,833	1,866	1,818	1,790
35-39	1,915	1,882	1,895	1,952	1,856	1,894	1,856
40-44	1,925	1,954	1,805	1,818	1,897	1,811	1,839
45-49	1,733	1,714	1,859	1,723	1,753	1,836	1,771
50-54	1,773	1,734	1,644	1,787	1,658	1,689	1,753
55-59	1,808	1,794	1,609	1,527	1,662	1,548	1,567
60-64	1,845	1,832	1,774	1,577	1,498	1,633	1,544
65-69	1,804	1,853	1,778	1,709	1,519	1,446	1,550
70-74	1,469	1,513	1,748	1,677	1,615	1,435	1,379
75-79	1,052	1,087	1,271	1,473	1,414	1,365	1,242
80-84	651	664	789	925	1,074	1,030	1,003
85+	730	732	787	894	1,033	1,200	1,248
Total	**31,011**	**30,981**	**30,890**	**30,799**	**30,675**	**30,514**	**30,356**

Figure 22. Malheur County's Sub-Areas—Total Population

Area / Year	2019	2020	2025	2030	2035	2040	2045	2050	2055	2060	2065	2069
Malheur County	31,011	30,981	30,890	30,799	30,675	30,514	30,317	30,122	29,928	29,735	29,544	29,392
Adrian	179	179	180	181	182	183	184	184	185	186	186	186
Jordan Valley	160	160	152	143	144	145	145	141	137	134	131	129
Nyssa	3,463	3,443	3,478	3,494	3,512	3,518	3,524	3,535	3,555	3,560	3,557	3,555
Ontario	12,207	12,211	12,222	12,228	12,240	12,256	12,256	12,242	12,245	12,219	12,180	12,149
Vale	2,159	2,164	2,171	2,186	2,192	2,198	2,199	2,204	2,212	2,213	2,210	2,208
Outside UGB Area	12,843	12,825	12,687	12,566	12,405	12,214	12,009	11,815	11,593	11,424	11,279	11,165